

# Future Ready Education: Transformation in Curriculum and Teachers Development in Finland

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Growningmind.fi

Kirstilonka.fi



What do you know/think/wonder about:

Finnish schools?

Teacher education?

Science learning?

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Please talk to the person(s) next to you  
and compare! I shall interrupt you by  
raising my hand after 3 minutes

# Seven urban legends of Finnish Education (Lonka, 2018)

1. Giving up subject-matter teaching
2. Minimal guidance and no structure
3. Digitalisation leads to giving up doing things by hand
4. Social and emotional interaction is diminishing
5. Hard work is not needed and schools are too entertaining
6. Collapsing PISA results and blaming the new curriculum
7. Common and serious internet addiction among youth

Kirsti Lonka

# PHENOMENAL LEARNING

from Finland

THIS PRESENTATION IS  
PARTIALLY BASED ON NEW  
BOOK BY PROF. KIRSTI LONKA



THE BOOK WAS  
PUBLISHED IN 2018  
AND COMING IN  
CHINESE IN 2019



<http://edita.editapublishing.fi/phenomenal-learning>



# FINNISH TEACHER TRAINING AT THE UNIVERSITY LEVEL

THE TRAINING OF  
SUBJECT MATTER TEACHERS (G7-G12)  
conducted at the university level since early 19th  
century (MA degree plus pedagogical studies)



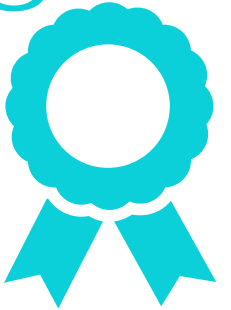
THE TRAINING OF  
CLASS TEACHERS (PRIMARY) (G1-G6)  
was transferred over to be carried out by  
universities in the early 1970s (MA degree)



THE TRAINING OF  
KINDERGARTEN TEACHERS  
in universities began in 1995 (BA, also MA)



# SUMMARY OF SOME BASIC FEATURES OF FINNISH TEACHER EDUCATION



- The level (MA) of teacher education is highest in the world
- It is very difficult to get in to a class teacher program (BA+MA), more than 2000 apply and 120 taken in (out of 20 to major in educational psychology)
- Attractive job: autonomous teachers, short school days, long holidays, relatively good salary
- Teachers are usually well-liked and respected, the same teachers may stay with the same class for several years
- 96 % of our students from Faculty of Education get a job quite soon after graduation (Statistics of 2018)
- Many PhD students of our Faculty have a class-teacher background
- Majority shall work as teachers
- Teacher education is also a respected HE degree for good positions in the society, for instance, the former President of the Republic of Finland and Nobel Peace Winner Martti Ahtisaari had a class teacher training



# WORK LIFE CALLS FOR COLLABORATIVE KNOWLEDGE CREATION

We need creative and active citizens

Physical spaces, social settings and technologies

School engagement is declining drastically



ARE WE ALIENATING OUR YOUTH WITH OUR OLD PRACTICES?





EDUCATION CHANGES  
VERY SLOWLY – ESPECIALLY IN OUR  
CASE: “don’t fix something that isn’t  
broken” is the most dangerous slogan  
– is there too much PISA in our heads?

# CURRENT DEVELOPMENTS



NEW BROAD-BASED SKILLS AND PHENOMENON-BASED LEARNING



CODING, AI, ROBOTICS, MAKER CULTURE



THE SOCIO-DIGITAL REVOLUTION



ARTS, SPORTS, MUSIC, HANDICRAFT STILL IN!



FOSTERING INNOVATION AND CREATIVITY

External world coming in and school going out!



# THE FINNISH 21ST CENTURY SKILLS

Participating,  
Influencing  
and Building  
a Sustainable  
Future

Working  
Life Skills and  
Entrepreneurship

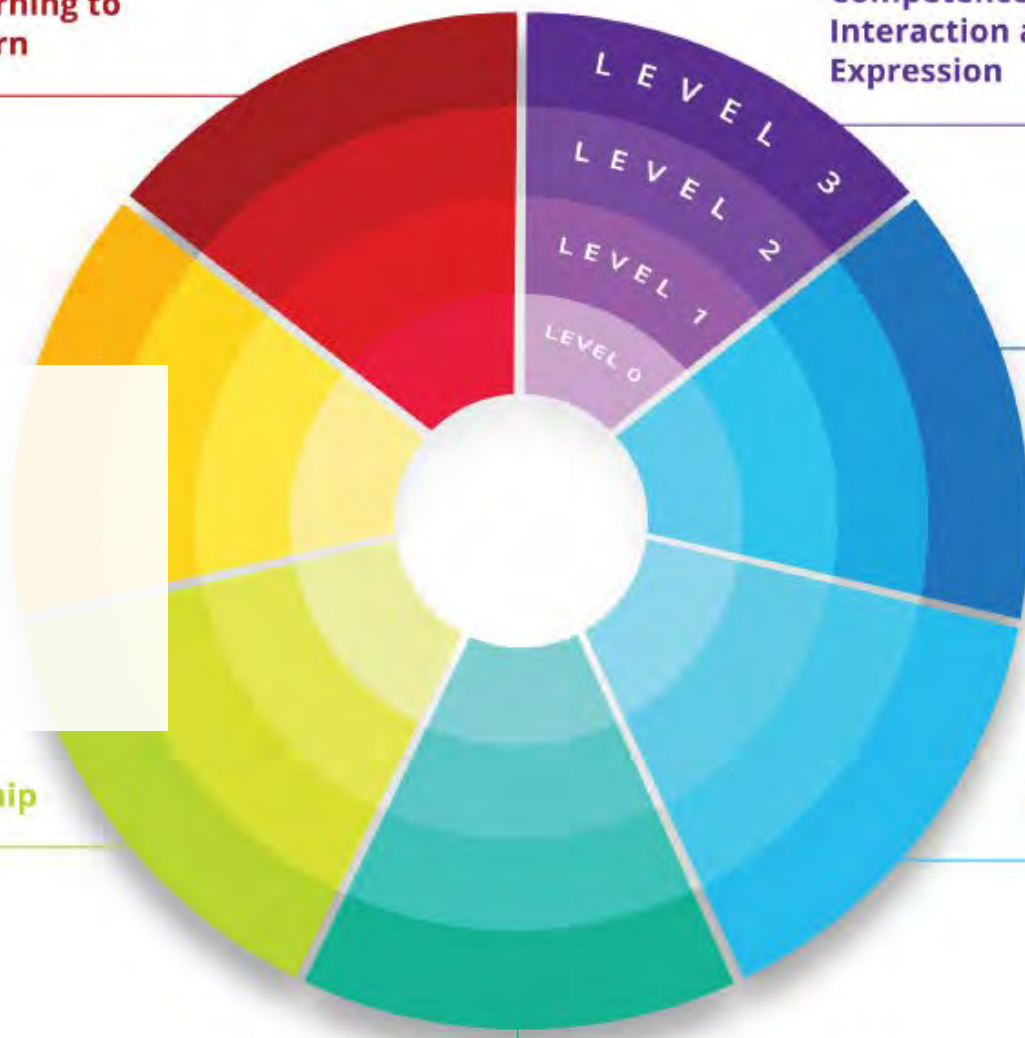
Thinking and  
Learning to  
Learn

Cultural  
Competence,  
Interaction and  
Expression

Self-care and  
Managing  
Everyday Life

Multiliteracy

Information and Communication  
Technology (ICT) Competence



<b>T1</b> <b>Thinking and Learning to Learn</b>	<b>T2</b> <b>Cultural Competence, Interaction and Self-Expression</b>	<b>T3</b> <b>Self-Care and Managing Everyday Life</b>	<b>T4</b> <b>Multiliteracy</b>	<b>T5</b> <b>Information and Communication Technology (ICT) Competence</b>	<b>T6</b> <b>Working Life Skills and Entrepreneurship</b>	<b>T7</b> <b>Participating, Influencing and Building a Sustainable Future</b>
<b>THEME 1</b> Enquiry-based Learning <b>THEME 2</b> Me as a Learner <b>THEME 3</b> Learning Community	<b>THEME 1</b> Cultural Encounters <b>THEME 2</b> Emotional Skills <b>THEME 3</b> Learning Community	<b>THEME 1</b> Managing Everyday Life <b>THEME 2</b> Being a Member of a Well-functioning Society <b>THEME 3</b> Safety and Security in Everyday Life	<b>THEME 1</b> Communication <b>THEME 2</b> Multimedia and Communication <b>THEME 3</b> Contextual Skills	<b>THEME 1</b> Enquiry-based and Creative Studying; Data Management <b>THEME 2</b> Practical Skills and Programming <b>THEME 3</b> Being Responsible and Safe <b>THEME 4</b> Social Interaction and Networking	<b>THEME 1</b> Readiness for Working Life <b>THEME 2</b> Social Interaction at Work <b>THEME 3</b> Working Life in Practice	<b>THEME 1</b> Means to Influence <b>THEME 2</b> Structures and Rules of Society <b>THEME 3</b> Building the Future



## LEVEL 0

The teacher does not address the influence of culture in their teaching of communications and multimedia.

## LEVEL 1

Students are guided in gaining an understanding of the role culture plays in communications and messaging in general. The teacher touches on the cultural and aesthetic context of communication and messages in general (e.g. how certain meanings are expressed visually, or verbally, depending on culture).

## LEVEL 2

Lesson plans include opportunities to evaluate and interpret messaging and communications through numerous cultural lenses. Students learn how to argue and defend their own cultural and aesthetics viewpoints.

## LEVEL 3

Lesson plans include numerous opportunities to create, evaluate, discuss and interpret a diverse range of messages and communications from a multitude of cultural and aesthetic contexts. Students understand the relativity of communication and how messages are always bound to the author's culture, and the context of its creation.

# T4 MULTILITERACY

## Contextual skills – Culture and Aesthetics

# HOW IS YOUR SCHOOL CULTURE PLEASE DOWNLOAD THE TOOL AND SEE

Available on  
[kirstilonka.fi/publications](https://kirstilonka.fi/publications)



- > Here you can evaluate and reflect on your schools' readiness to teach according to the new Finnish curriculum
- > [https://kirstilonka.files.wordpress.com/2018/08/evaluation\\_framework\\_microsoft\\_final.pdf](https://kirstilonka.files.wordpress.com/2018/08/evaluation_framework_microsoft_final.pdf)

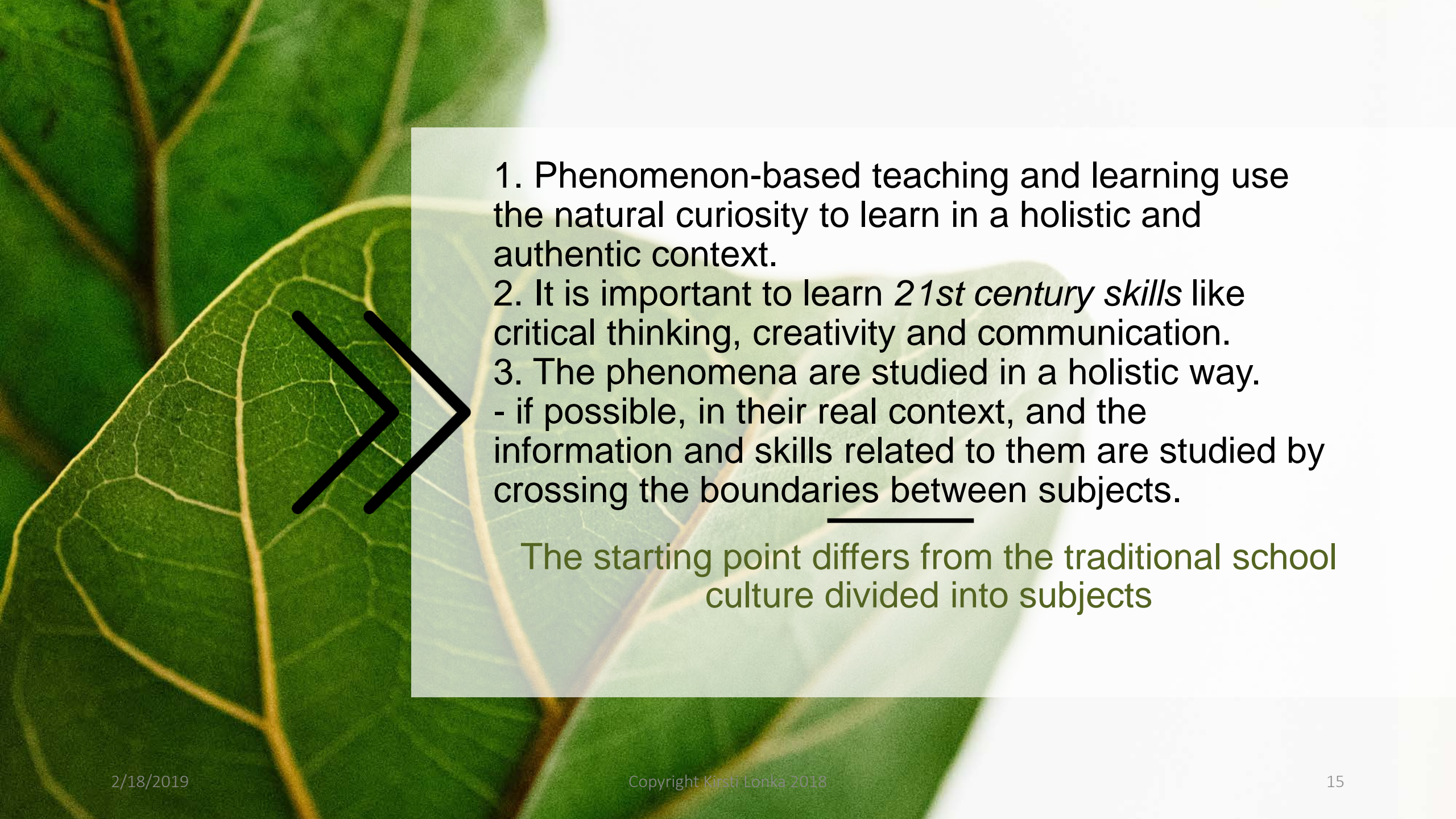
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*What is*

PHENOMENON-

**BASED**

LEARNING?

- 
1. Phenomenon-based teaching and learning use the natural curiosity to learn in a holistic and authentic context.
  2. It is important to learn *21st century skills* like critical thinking, creativity and communication.
  3. The phenomena are studied in a holistic way.  
- if possible, in their real context, and the information and skills related to them are studied by crossing the boundaries between subjects.

The starting point differs from the traditional school culture divided into subjects

# PHENOMENON-BASED LEARNING



INQUIRY OR PBL  
THAT STARTS FROM A  
LARGER  
PHENOMENON



INTEGRATES  
VARIOUS SCHOOL  
SUBJECTS



1-2 PROJECTS PER  
YEAR IN THE NEW  
FINNISH  
CURRICULA



SOMEWHAT  
SIMILAR TO  
STEAM OR  
ISSUE-BASED  
LEARNING



# SUMMER SCHOOL IN FINLAND AUGUST 2017

Phenomenon to study: "Energy" in collaboration with Lenovo, Claned, and Intel



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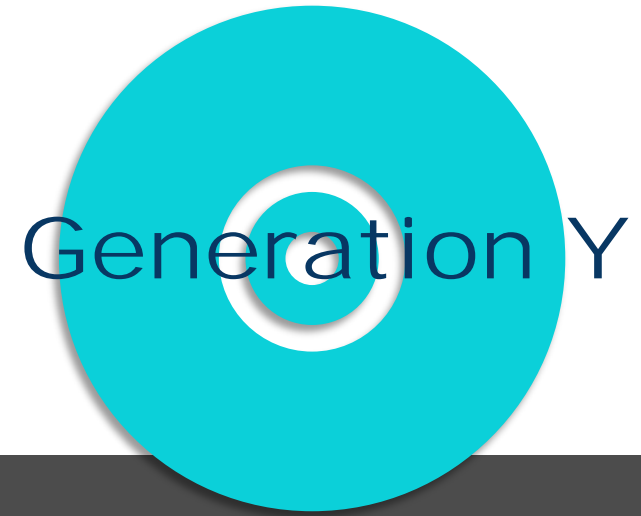
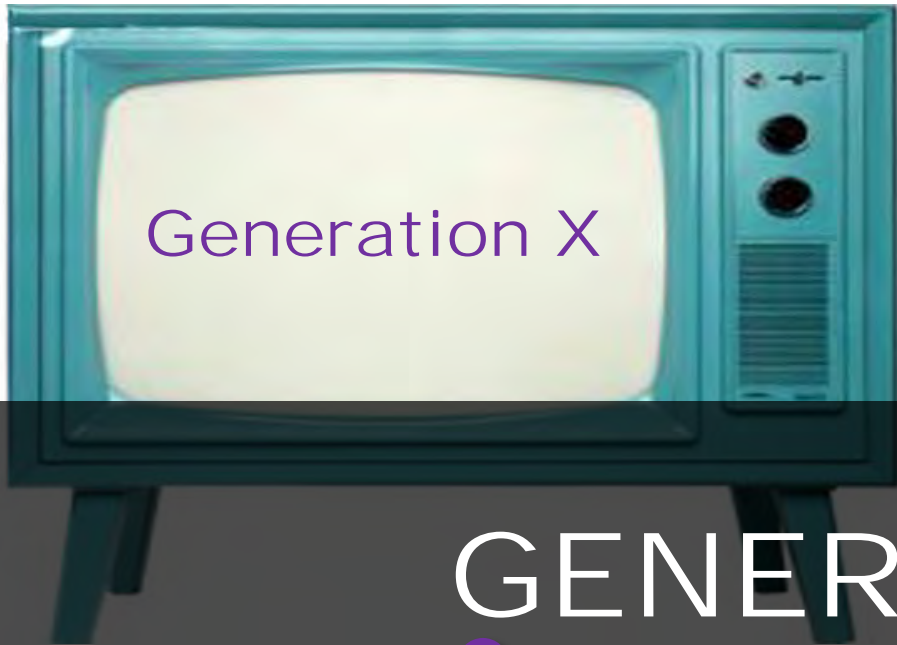
***Those teachers whose main goal was to teach certain facts, did not find critical thinking or creativity as relevant as those who valued reflection and collaboration. Their ideas of assessment were also more traditional.***

Lammassaari et al, in progress

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*According to Finnish 6th graders in Helsinki area, their teachers were the main source of school engagement. The pupils appreciated their great work in any other sense, expect the readiness to promote their digital engagement*

(Halonen et al., 2017)



# GENERATION CLASH?





## SOCIO-DIGITAL TECHNOLOGIES



- Integrated systems of novel technological tools, social media, and the Internet that enable constant and intensive online-interaction with information, people, and artefacts

## SOCIO-DIGITAL PARTICIPATION

- Informal, socio-digitally mediated participatory practices



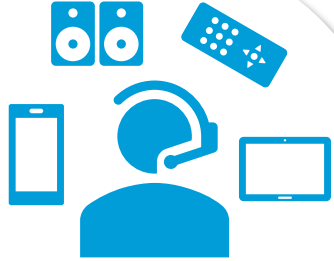
*Lauri Hietajärvi (Doctoral Dissertation in progress)  
Link to the report for EU Parliament  
[kirstilonka.fi/publications](http://kirstilonka.fi/publications) and Lonka (2018)*



# KNOWLEDGE PRACTICES OF "DIGITAL NATIVES"

Hietajärvi et al.  
(2015) We are  
endangering the  
school engagement  
of this generation!





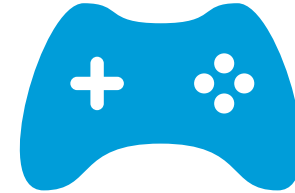
**MULTI-TASKING**



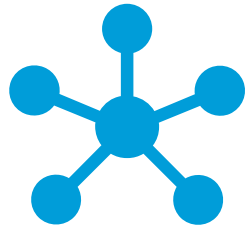
**READING FROM  
SCREEN**



**CHATTING**



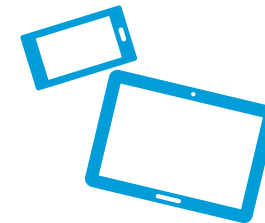
**GAMING**



**SOCIO-DIGITAL  
NETWORKING**

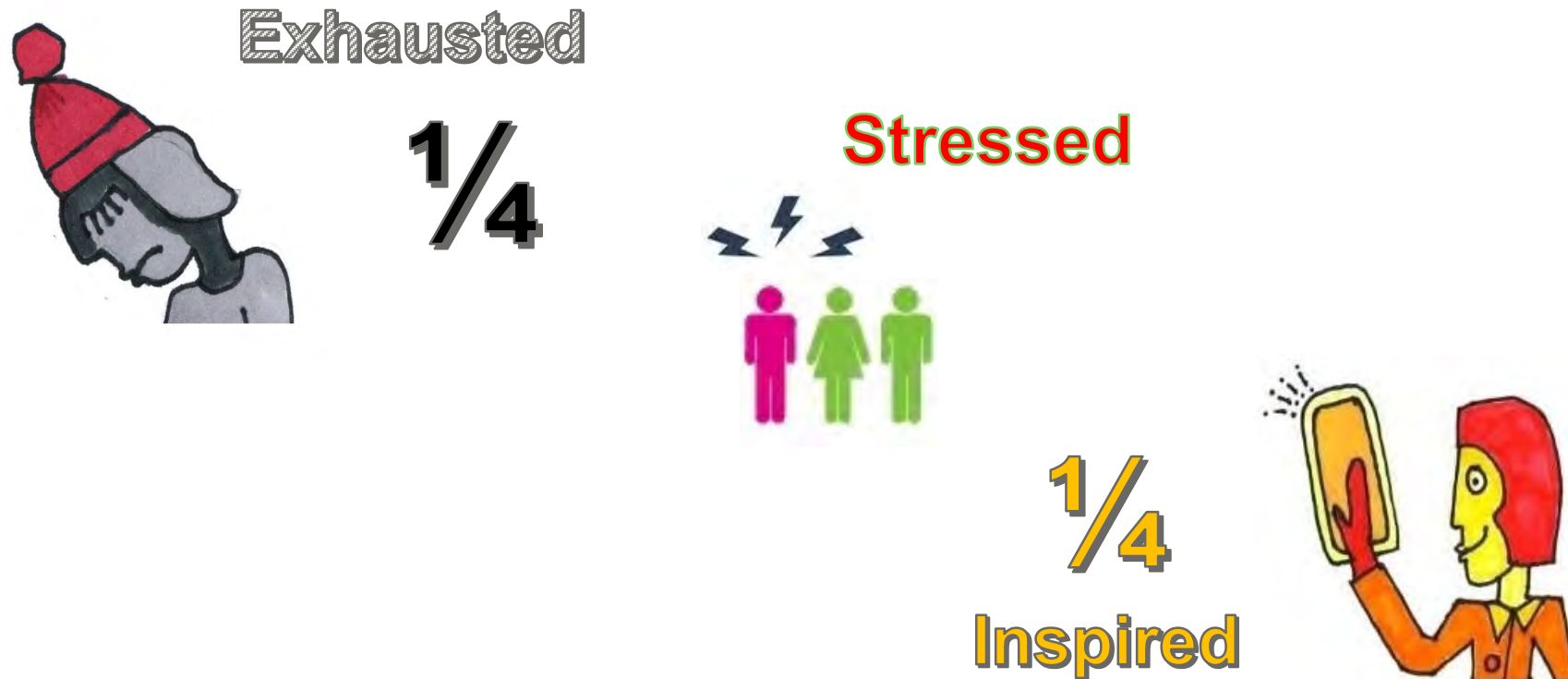


**CONSTANTLY  
ONLINE**



**DEPENDENT ON  
MOBILE DEVICES**

# DO MOTIVATION AND EMOTIONS MATTER? ELINA KETONEN' (2017) DOCTORAL DISSERTATION ON UNIVERSITY STUDENTS. AVAILABLE: [ETHESIS.HELSENKI.FI](https://ethesis.helsinki.fi)



Source: The Finnish Student Health Survey 2016.



### Study III (Ketonen, 2017 Doctoral dissertation)

- Students' academic engagement profiles and profile differences in long-term academic achievement
- Law, theology, science, electrical engineering and student teachers (N=668)
- Questionnaire, Person-oriented approach



**Engaged students (69%)**



**55 study credits**



**Disengaged students (14%)**



**Undecided students (9%)**



**Alienated students (8%)**

**Ketonen, E., Haarala-Muhonen, A., Hirsto, L., Hänninen, J., Wähälä, K., & Lonka, K. (2016). Am I in the right place? Academic engagement and study success during the first years at university. *Learning and Individual Differences, 51*, 141–148.**



# ACTIVATING AND ENGAGING LEARNING METHODS

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(Lonka & Ahola, 1995; Hakkarainen 1998; Lonka & Ketonen, 2012)



# FEED FORWARD VS FEED BACK



CONSTRUCTIVE AND FRIENDLY  
ATMOSPHERE

When you start a learning process, activate previous ideas in a safe atmosphere – do not look for right answers yet



DO NOT COMMENT ON PERSON

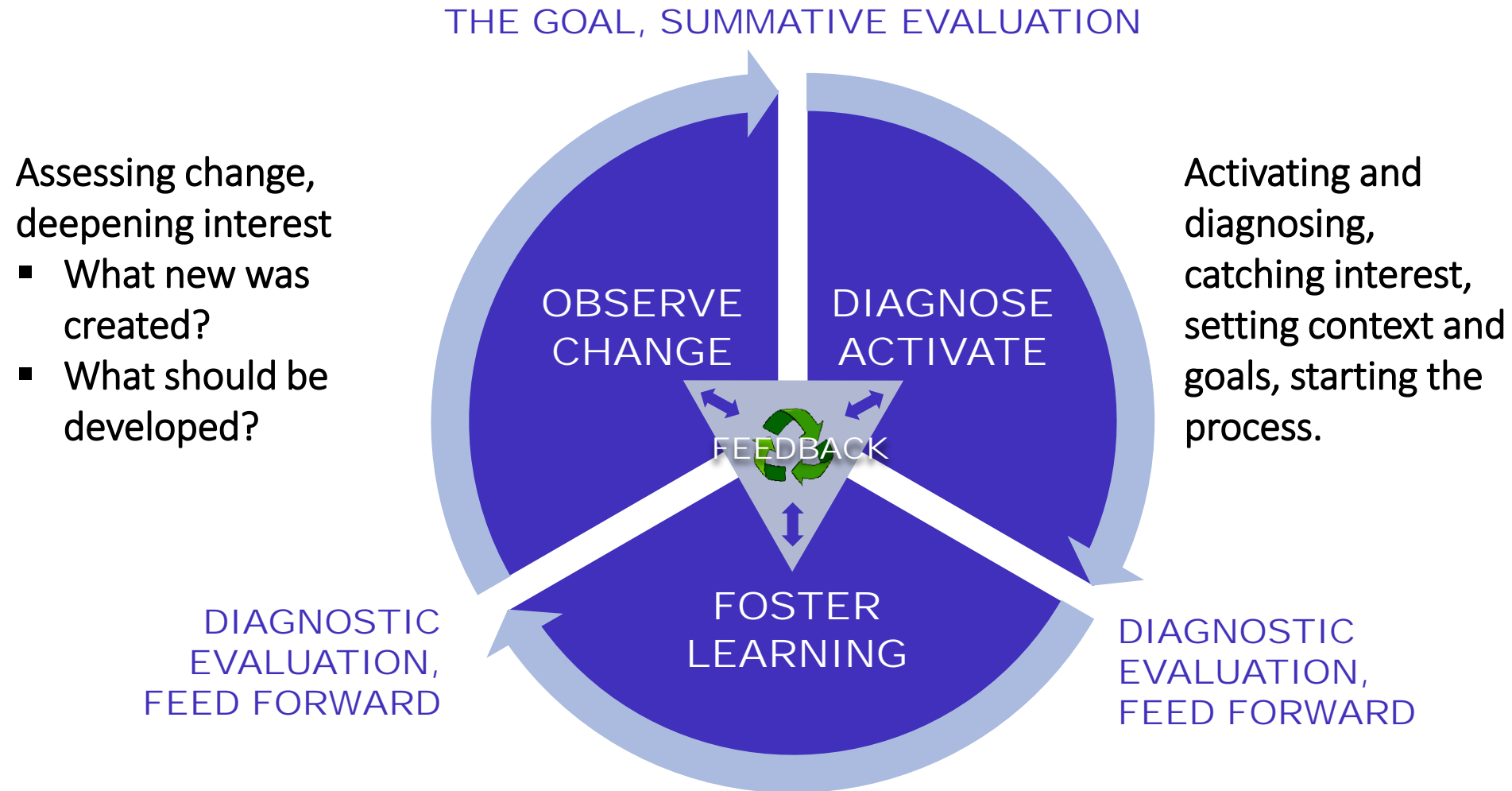
There are no "smart people", just interesting ideas. Put the ideas in the centre!



TRY TO THINK HOW TO FEED  
FORWARD THE PROCESS

Focus in the future: not how we are doing now, but how well we shall do in the future!

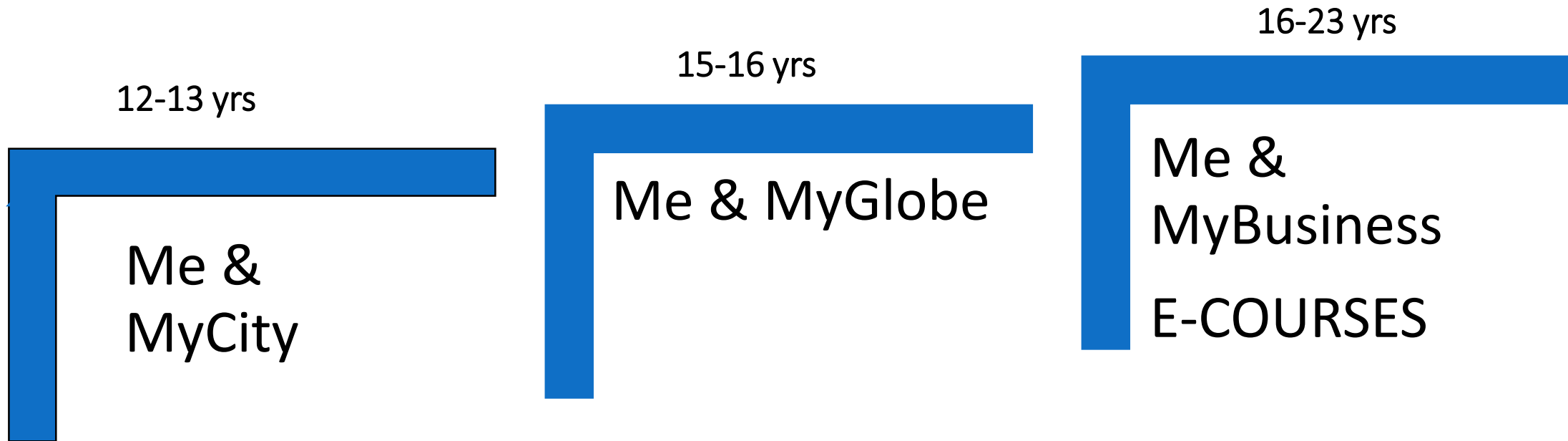
# The Engaging Learning model (Lonka, 2012; 2018)



Fostering the learning process and reflective thinking, maintaining interest, (face to face, P2P, virtually etc.), creating new knowledge or new practices

# EduTAT learning path

A learning path developed in Finland on economy, entrepreneurship, working life and society



Examples and practices based on Engaging Learning Model by Professor Kirsti Lonka (2012; 2018)

# PHENOMENAL TEACHER EDUCATION



*#luovaope*

# OUR TEAM



PROFESSOR  
Kirsti Lonka  
University of  
Helsinki, Finland



PhD CANDIDATE  
Heidi  
Lammassaari  
University of  
Helsinki, Finland



PhD CANDIDATE  
Milla Kruskopf  
University of  
Helsinki, Finland



PhD CANDIDATE  
Lauri J. Vaara  
Economic  
Information Office  
(TAT)

OUR PROJECT

# PHENOMENAL TEACHER EDUCATION

TRANSVERSIAL SKILLS  
PHYSICAL, VIRTUAL,  
PEDAGOGICAL, MOBILE,  
INTELLIGENT solutions

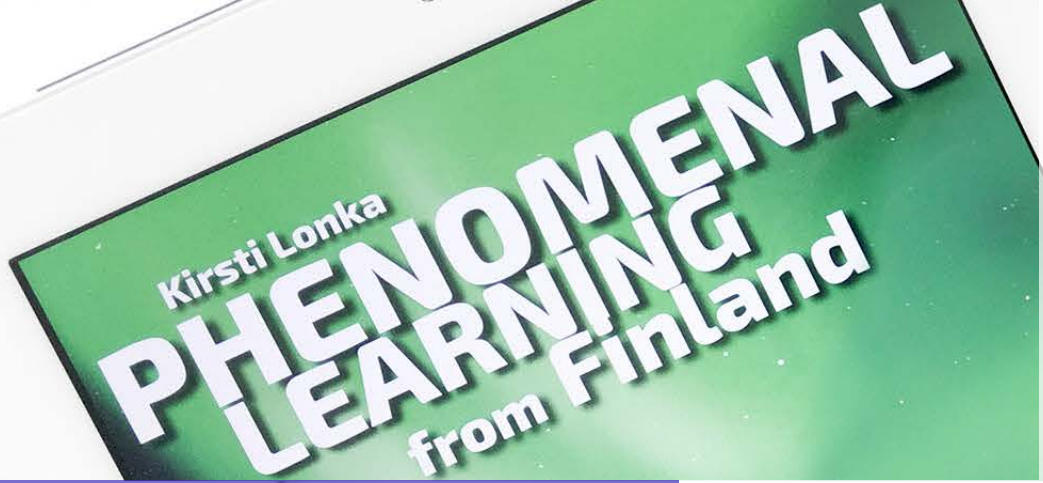
EDUCATION  
EXPORT

ADVISORY  
BOARD

PARTNERS

Teacher's  
Academy of  
University of  
Helsinki

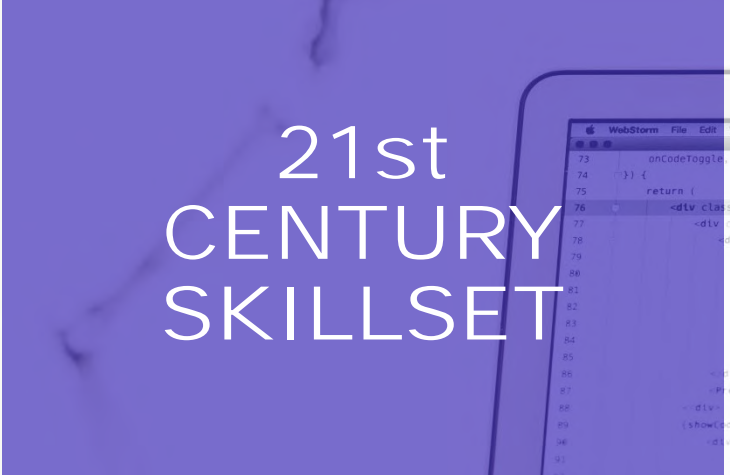
FUNDED BY  
FINNISH  
MINISTRY OF  
EDUCATION



*We will update teachers' knowledge on the evidence-based best practices, such as PBL, and flipped classroom methods.*



**UPDATED  
PEDAGOGICS**



**21st  
CENTURY  
SKILLSET**

*We will enhance teachers' understanding on what 21st century citizens need to thrive in the world of the future.*



**WHAT  
WE WILL  
DO...**

*Including Pedagogical Content Knowledge!*



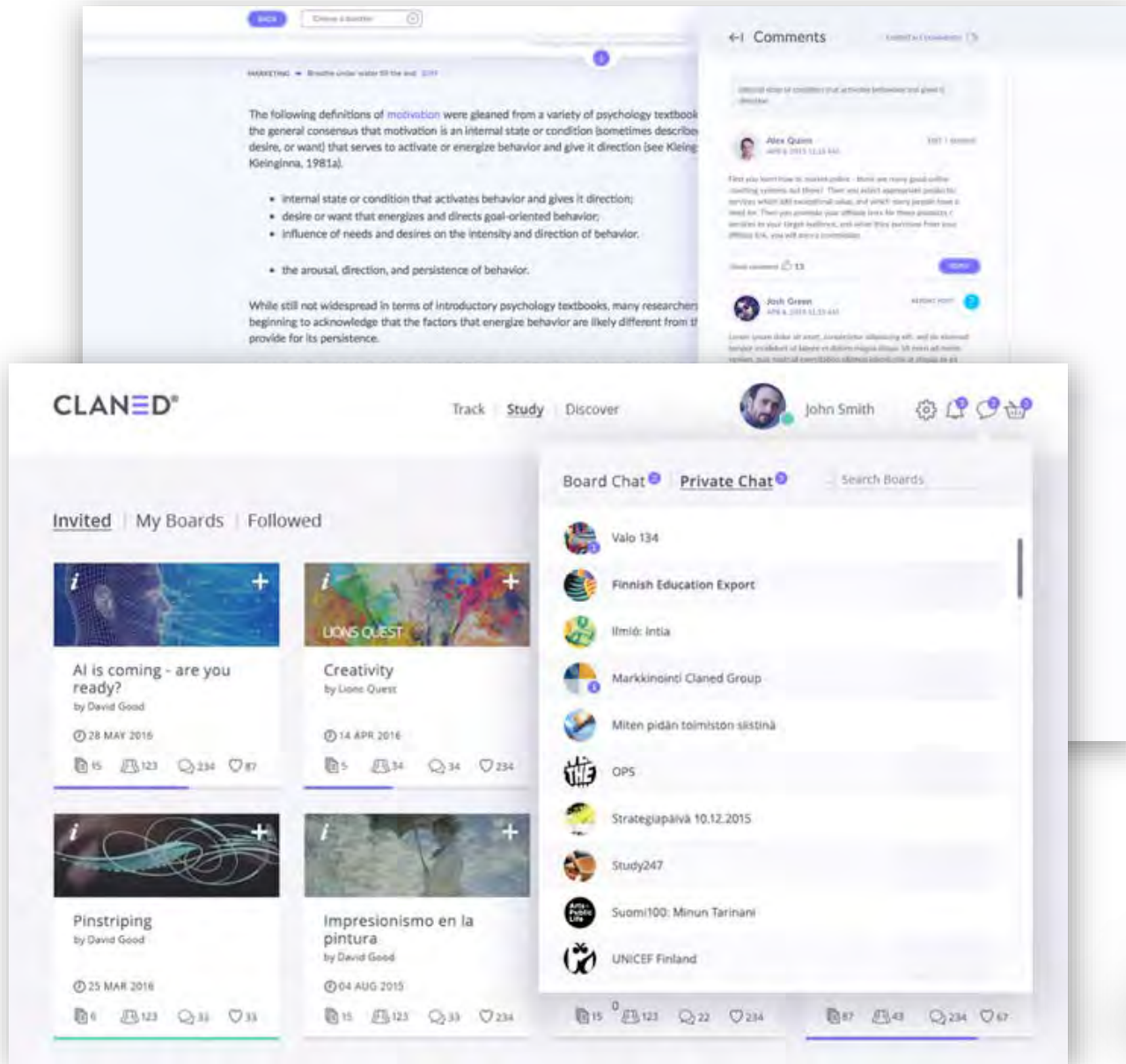
**MODERN  
LEARNING  
ENVIRONMENTS**



*We will utilize most up-to-date technologies to promote creation of modern, hybrid learning environments.*

# CLANED™

Platform for  
personalised and  
social learning





# HOW TO CHANGE THE CULTURE?

—  
OF SCHOOLS, UNIVERSITIES AND  
WORKPLACES?



vs.



*How to create new cultures for*  
**SCHOOLS AND TEACHER**  
**EDUCATION?**

# TRANSFORM...



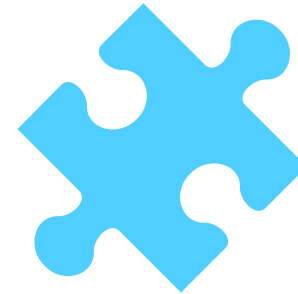
PHYSICAL  
SPACES



SOCIAL  
PRACTICES



VIRTUAL WAYS  
OF  
INTERACTING



PEDAGOGICAL  
MODELS



SHARED  
MENTAL  
MODELS OF  
LEARNING

# ENGAGING LEARNING ENVIRONMENT FOR FUTURE TEACHERS - MINERVA PLAZA


(LONKA, 2012)

Video by mikko.l.Halonen <http://vimeo.Com/60818003>



Prof Kirsti Lonka



A photograph of a modern learning space. In the foreground, there are several white, hexagonal tables arranged in a cluster, surrounded by bright red chairs. To the right, a large black flat-screen monitor is mounted on a stand, displaying a dark screen. Below the monitor, there is a small black device, possibly a media player or computer. To the left, a whiteboard is mounted on a stand, showing some faint diagrams. The room has large windows with grey curtains, and a red car is visible outside. The overall atmosphere is bright and professional.

# MINERVA LEARNING SPACES IN 2016



BEFORE

THE SOLUTIONS CAN BE  
AFFORDABLE!

Flexible places for learning project (2015-2016)

IN ESPOO, FINLAND



AFTER



# GROWING MIND

*Educational transformations for facilitating sustainable personal, social, and institutional renewal in the digital age*

*PI Professor [kai.hakkarainen@helsinki.fi](mailto:kai.hakkarainen@helsinki.fi)*

*Presenting today: Professor Kirsti Lonka*

**Faculty of Education, University of Helsinki, Finland**



HELSINGIN YLIOPISTO



TAMPEREEN  
YLIOPISTO



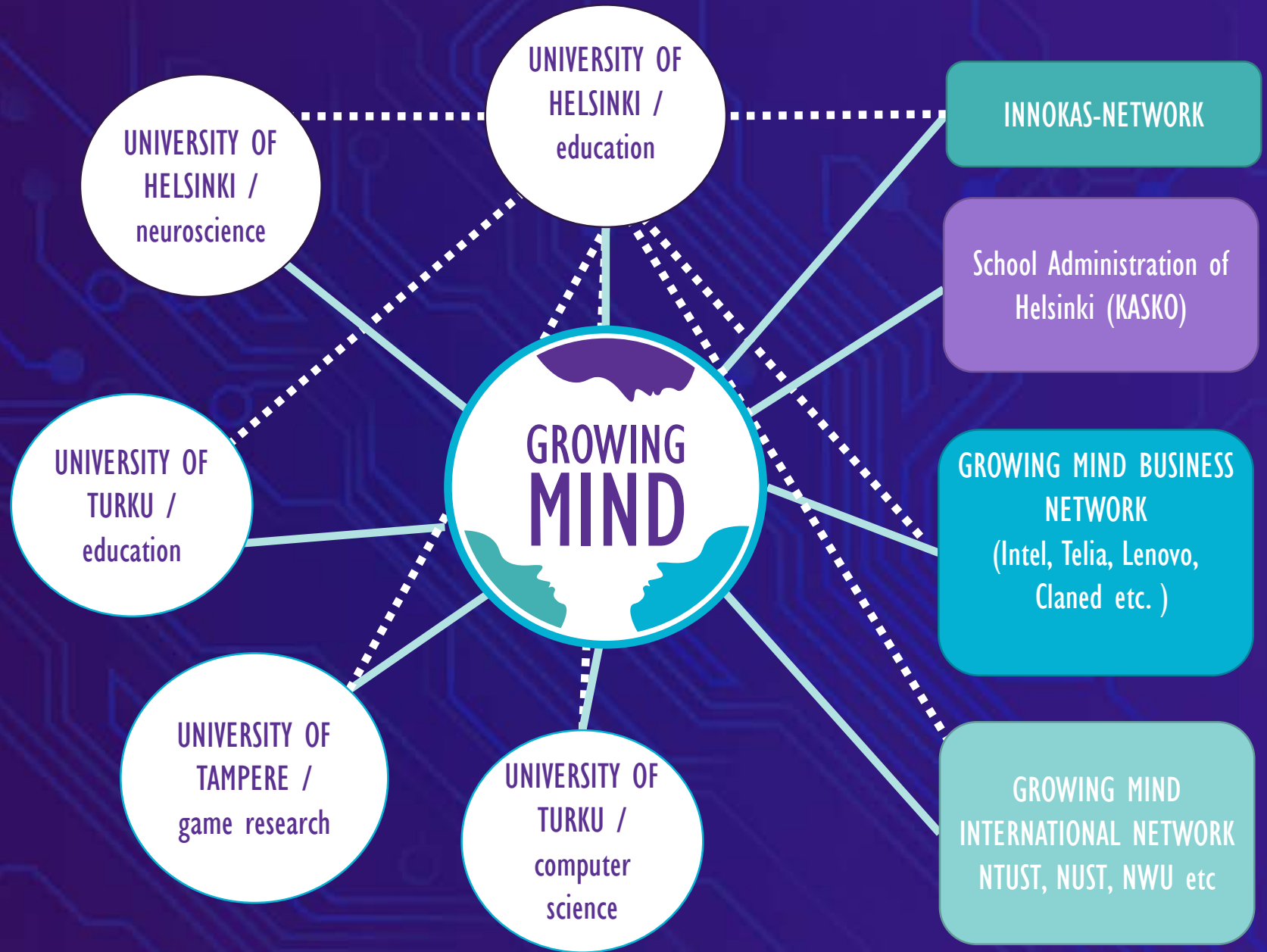
Turun yliopisto  
University of Turku

*Innovas!*

Helsinki  
Helsingfors



# GROWING MIND GLOBAL NETWORK







COMMENTS?  
QUESTIONS?

Contact:  
[kirsti.lonka@helsinki.fi](mailto:kirsti.lonka@helsinki.fi)

Kirsti Lonka  
**PHENOMENAL  
LEARNING**  
from Finland

# NEW BOOK BY KIRSTI LONKA!



THE BOOK WILL BE  
PUBLISHED IN SPRING 2018.



<http://edita.editapublishing.fi/phenomenal-learning>



# OUR FINDINGS

European Parliament (Ed.). 2015. *Innovative Schools: Teaching & Learning in the Digital Era – Workshop Documentation*. Brussels: European Parliament. Pages 5-46.

Slides on page 73.

Link on [kirstilonka.fi/publications](http://kirstilonka.fi/publications):

[http://www.europarl.europa.eu/RegData/etudes/STUD/2015/563389/IPOL\\_STU%282015%29563389\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/563389/IPOL_STU%282015%29563389_EN.pdf)

# SOME Latest Publications 2018

- Lonka, K., Ketonen, E., Vekkaila, J., Cerrato Lara, M. & Pyhältö, K. (in press) Doctoral students' writing profiles and their relations to well-being and perceptions of the academic environment. *Higher Education*.
- Ketonen, E. E., Dietrich, J., Moeller, J., Salmela-Aro, K., & Lonka, K. (2018). The role of daily autonomous and controlled educational goals in students' academic emotion states: An experience sampling method approach. *Learning and Instruction, 53*, 10-20
- Ketonen, E., Malmberg, L-E., Salmela-Aro, K., Muukkonen, H., Tuominen, H., & Lonka, K. (Manuscript submitted for publication). *The role of study engagement in university students' daily experiences: A multilevel test of moderation*.
- Lammassaari, H., Lonka, K., Hietajärvi, L. & Chen, S. (2018, in preparation). Putting teachers' conceptions of learning and knowledge in practice: Teacher Epistemic Questionnaire (TEQ).
- Lonka, K., Talvio, M., Marttinen, K., & Ketonen, E. (2018, in preparation). Engaging blended leadership training – how to help middle managers to deal with challenging social situations?
- Lammassaari, H., Hietajärvi, L., Salmela-Aro, K., Chen, S. & Lonka, K. (2018, in preparation). Teachers' Epistemic Cognition, New Challenges Of Their Work, And The Manifestation Of Work Engagement And Burnout Symptoms.
- Maksniemi, E., Hietajärvi, L., Marttinen, E., Lonka, K. & Salmela-Aro, K. (2018). Sosiodigitaalisen osallistumisen, unenlaadun ja kouluhyvinvoinnin väliset yhteydet kuudesluokkalaisilla. *Psykologia*.

# SOME Latest Publications 2017

- Cerrato-Lara, M., Castelló, M., García-Velázquez, R., & Lonka, K. (2017). Validation of the Writing Process Questionnaire in Two Hispanic Populations: Spain and Mexico. *Journal of Writing Research*, 9(2), 151-172.
- Dhir, A., Kaur, P., Lonka, K., & Tsai, C-C. (2017). Do psychosocial attributes of well-being drive intensive Facebook use? *Computers in Human Behavior*, 68, 520-527. DOI: 10.1016/j.chb.2016.11.023
- Dhir, A., Khalil, A., Lonka, K., & Tsai, C-C. (2017). Do educational affordances and gratifications drive intensive Facebook use among adolescents? *Computers in Human Behavior*, 68, 40-50. DOI: 10.1016/j.chb.2016.11.014
- Lonka, K. (2017). Building a school for the digital natives generation. *Debates on education*, 45. Barcelona: Fundació Jaume Bofill and UOC. ISBN: 978-84-946592-4-9
- Moisala, M., Salmela, V., Hietajärvi, L., Carlson, S., Vuontela, V., Lonka, K., ... Alho, K. (2017). Gaming is related to enhanced working memory performance and task-related cortical activity. *Brain Research*, 1655, 204-215. DOI: 10.1016/j.brainres.2016.10.027
- Obschonka, M., Hakkarainen, K., Lonka, K., & Salmela-Aro, K. (2017). Entrepreneurship as a twenty-first century skill: entrepreneurial alertness and intention in the transition to adulthood. *Small Business Economics*, 48(4), 487-501. DOI: 10.1007/s11187-016-9798-6
- Salmela-Aro, K., Upadyaya, K., Hakkarainen, K., Lonka, K., & Alho, K. (2017). The dark side of internet use: Two longitudinal studies of excessive internet use, depressive symptoms, school burnout and engagement among Finnish early and late adolescents. *Journal of Youth and Adolescence*, 46(2), 343-357. DOI: 10.1007/s10964-016-0494-2

# SOME Latest Publications 2016

Dhir, A., Kaur, P., Chen, S., & Lonka, K. (2016). Understanding online regret experience in Facebook use – Effects of brand participation, accessibility & problematic use. *Computers in Human Behavior*, 59, 420-430. DOI: 10.1016/j.chb.2016.02.040

Dhir, A., Kaur, P., Lonka, K., & Nieminen, M. (2016). Why do adolescents untag photos on Facebook? *Computers in Human Behavior*, 55(Part B), 1106–1115. DOI: 10.1016/j.chb.2015.11.017

Halonen, N., Hietajärvi, L., Lonka, K., & Salmela-Aro, K. (2016). Sixth graders' use of technologies in learning, technology attitudes and school well-being. *The European Journal of Social & Behavioural Sciences*, XVIII(1), 2307-2324. [205]. DOI: 10.15405/ejsbs.205

Ketonen, E. E., Haarala-Muhonen, A., Hirsto, L., Hänninen, J. J., Wähälä, K., & Lonka, K. (2016). Am I in the right place? Academic engagement and study success during the first years at university. *Learning and Individual Differences*, 51, 141-148. DOI: 10.1016/j.lindif.2016.08.017

Moisala, M., Salmela, V., Hietajarvi, L., Salo, E., Carlson, S., Salonen, O., ... Alho, K. (2016). Media multitasking is associated with distractibility and increased prefrontal activity in adolescents and young adults. *NeuroImage*, 134, 113-121. DOI: 10.1016/j.neuroimage.2016.04.011

Salmela-Aro, K., Muotka, J., Alho, K., Hakkarainen, K. & Lonka, K. (in press). School burnout and engagement profiles among digital natives in Finland: a person-oriented approach. *European Journal of Developmental Psychology*. <http://dx.doi.org/10.1080/17405629.2015.1107542>

Sandström, N., Eriksson, R., Lonka, K. & Nenonen, S. (in press). Usability and affordances for inquiry-based learning in a blended learning environment. *Facilities*.

Sjöblom, K., Mälkki, K., Sandström, N., & Lonka, K. (2016). Does Physical Environment Contribute to Basic Psychological Needs? A Self-Determination Theory Perspective on Learning in the Chemistry Laboratory. *Frontline Learning Research*, 4(1), 17-39. DOI: 10.14786/flr.v4i1.217

# SOME Latest Publications 2015-2016

- Talvio, M., Berg, M., Komulainen, E., & Lonka, K. (2016). Exploring the coherence of the goals achieved through a youth development programme. *Procedia : Social and Behavioral Sciences*, 217, 469-476. DOI: 10.1016/j.sbspro.2016.02.017
- Talvio, M., Berg, M., Litmanen, T., & Lonka, K. (2016). The Benefits of Teachers' Workshops on Their Social and Emotional Intelligence in Four Countries. *Creative Education*, 7(18), 2803-2819. DOI: 10.4236/ce.2016.718260

## 2015

- Anttila, H., Lindblom-Yläne, S., Lonka, K. & Pyhältö, K. (2015) The added value of a PhD in medicine – PhD students' perceptions of acquired competences. *International Journal of Higher Education*, 4, 172-180. doi:10.5430/ijhe.v4n2p172
- Numminen, A., Lonka, K., Rainio, A. P. & Ruismäki, H. (2015). 'Singing is no longer forbidden to me – it's like part of my human dignity has been restored.' Adult non-singers learning to sing: An explorative intervention study. *The European Journal of Social & Behavioural Sciences* . 12, 1, 1660-1674.
- Nurttila, S., Ketonen, E. & Lonka, K. (2015). Sense of competence and optimism as resources to promote academic engagement. *Social and Behavioral Sciences*, 171, 1017-1026.
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